

ABSTRACT

METHOD FOR FABRICATING SEED LAYER FOR SPIN VALVE SENSOR FOR MAGNETIC HEADS FOR HARD DISK DRIVES

A magnetic head having a spin valve sensor that is fabricated utilizing an Al_2O_3 , NiMnO ,
5 NiFeCr seed layer upon which a typical PtMn spin valve sensor layer structure is subsequently
fabricated. The preferred embodiment fabrication process of the NiFeCr layer includes the
overdeposition of the layer to a first thickness of from 15 Å to 45 Å followed by the etching back
of the seed layer of approximately 5 Å to approximately 15 Å to its desired final thickness of
approximately 10 Å to 40 Å. The Cr at.% composition in the NiFeCr layer is preferably from
10 approximately 35 at.% to approximately 46 at.%. The crystal structure of the surface of the
etched back NiFeCr layer results in an improved crystal structure to the subsequently fabricated
spin valve sensor layers, such that the fabricated spin valve exhibits increased $\Delta R/R$ and reduced
coercivity.